

Supplementary Appendix:

eTable 1: Summary of Healthcare Databases:

Database Name	Description	Coverage/limitations
Ontario Drug Benefit Claims Database	This database captures data on all prescription drugs dispensed from retail pharmacies to individuals eligible for public drug coverage in Ontario, Canada. Data captured includes drug identification number, quantity dispensed, and duration of prescription.	<p>Eligibility for public drug coverage in Ontario includes:</p> <ul style="list-style-type: none"> • Aged 65 or older • Residents of long-term care facilities • Individuals with low socio-economic status • Residents receiving home care services • Recipients of disability support benefits • Residents with high drug costs relative to income <p><i>Limitations:</i> Captures drugs dispensed, but not information on whether individual actually took the medication</p>
Canadian Institute for Health Information (CIHI) Databases [General Description]	CIHI is an independent, not-for-profit organization that provides information on Canada's health system and the health of Canadians. This data is captured from all hospitals across Canada, and undergoes rigorous data quality checks before being used for research purposes.	All residents of Ontario
CIHI Discharge Abstract Database (DAD)	This CIHI database contains information about inpatient hospitalizations occurring in Ontario, including clinical data (diagnoses, procedures), and administrative data (institution, admission category, length of stay, disposition)	All residents of Ontario with an inpatient admission to any acute care hospital
CIHI National Ambulatory Care Reporting System (NACRS)	This CIHI database contains information about emergency department visits occurring in Ontario, including clinical data (diagnoses, procedures), and administrative data (institution,	All residents of Ontario with an emergency department visit at an acute care hospital

	admission category, length of stay, disposition)	
CIHI Same Day Surgery (SDS)	This CIHI database contains information about same day surgeries occurring in Ontario day surgery institutions, including clinical data (diagnoses, procedures), and administrative data (institution, admission category, length of stay, disposition)	All residents of Ontario with a same day surgery
CIHI Ontario Mental Health Reporting System (OMHRS)	This CIHI database collects data on patients in adult designated inpatient mental health beds in Ontario. This includes beds in General, Provincial Psychiatric, and Specialty Psychiatric facilities. Child and adolescent mental health care are collected in the DAD (described above).	All adults receiving inpatient mental health services in Ontario. <i>Limitations:</i> mental health care for children/adolescents is captured in the DAD described above.
Ontario Health Insurance Plan (OHIP) claims database	This database captures details on physician services provided across the province, including patient and physician identifiers, codes for the service provided, date of service, associated diagnosis, and fee paid.	All individuals in Ontario receiving physician services (all services are publicly funded). <i>Limitations:</i> 5% of physicians are not required to submit claims to this database as they are remunerated through other means.
Ontario Diabetes Database	This validated database captures incident and prevalent diabetes cases in Ontario with 90% sensitivity and 98% specificity	All Ontarians. <i>Limitations:</i> cannot differentiate between Type 1 and Type 2 diabetes.
Ontario Hypertension Database	This validated dataset contains all Ontario hypertension patients identified since 1991 in Ontario with a sensitivity of 72% and a specificity of 95%	All Ontarians.
Ontario Myocardial Infarction Dataset	This validated database captures all incident acute myocardial infarctions (AMIs) resulting in a hospitalization in Ontario.	All Ontarians <i>Limitations:</i> the database does not capture outpatients AMIs, recurrent AMIs within a year of the index, or AMIs occurring as in-hospital complications on a non-cardiac surgical ward.

eTable 2: Antipsychotics included in exposure definition

Oral	Injectable	Rectal
Atypical Antipsychotics		
<i>Aripiprazole</i>	<i>Risperidone</i>	
<i>Asenapine</i>	<i>Paliperidone</i>	
<i>Clozapine</i>		
<i>Lurasidone</i>		
<i>Olanzapine</i>		
<i>Paliperidone</i>		
<i>Quetiapine</i>		
<i>Risperidone</i>		
<i>Ziprasidone</i>		
Typical Antipsychotics		
<i>Haloperidol</i>	<i>Haloperidol</i>	<i>Prochlorperazine</i>
<i>Chlorpromazine</i>	<i>Flupentixol</i>	
<i>Flupentixol</i>	<i>Fluphenazine</i>	
<i>Fluphenazine</i>	<i>Methotrimeprazine</i>	
<i>Loxapine</i>	<i>Pipotiazine</i>	
<i>Methotrimeprazine</i>	<i>Prochlorperazine</i>	
<i>Periciazine</i>	<i>Zuclopenthixol</i>	
<i>Perphenazine</i>		
<i>Pimozide</i>		
<i>Prochlorperazine</i>		
<i>Thiothixene</i>		
<i>Trifluoperazine</i>		
<i>Zuclopenthixol</i>		

eTable 3: Major Mental Illness (Schizophrenia, non-schizophrenia psychotic disorder, bipolar disorder or major depression)

OHIP Diagnosis Codes*	OMHRS	CIHI-DAD/SDS
295, 297, 298, 296	<p>ICD9: 295, 297, 298, 296</p> <p>OMHRS provision diagnosis (only if no DSM-IV diagnosis): Q1E=1 – i.e., provdx1-3=5.</p> <p>ICD10: F20, F25, F22, F23, F24, F28, F29, F30, F31, F32.3, F33.1, F33.2, F33.3</p>	<p>ICD10: F20, F25, F22, F23, F24, F28, F29, F30, F31, F32.3, F33.1, F33.2, F33.3</p>

*OHIP Diagnosis codes are based on the International Classification of Diseases, 9th Revision (ICD-9) codes, but contain some differences. A full list of these codes can be found in Section 4 of the Online Resource Manual for Ontario Physicians

(http://www.health.gov.on.ca/english/providers/pub/ohip/physmanual/physmanual_mn.html)

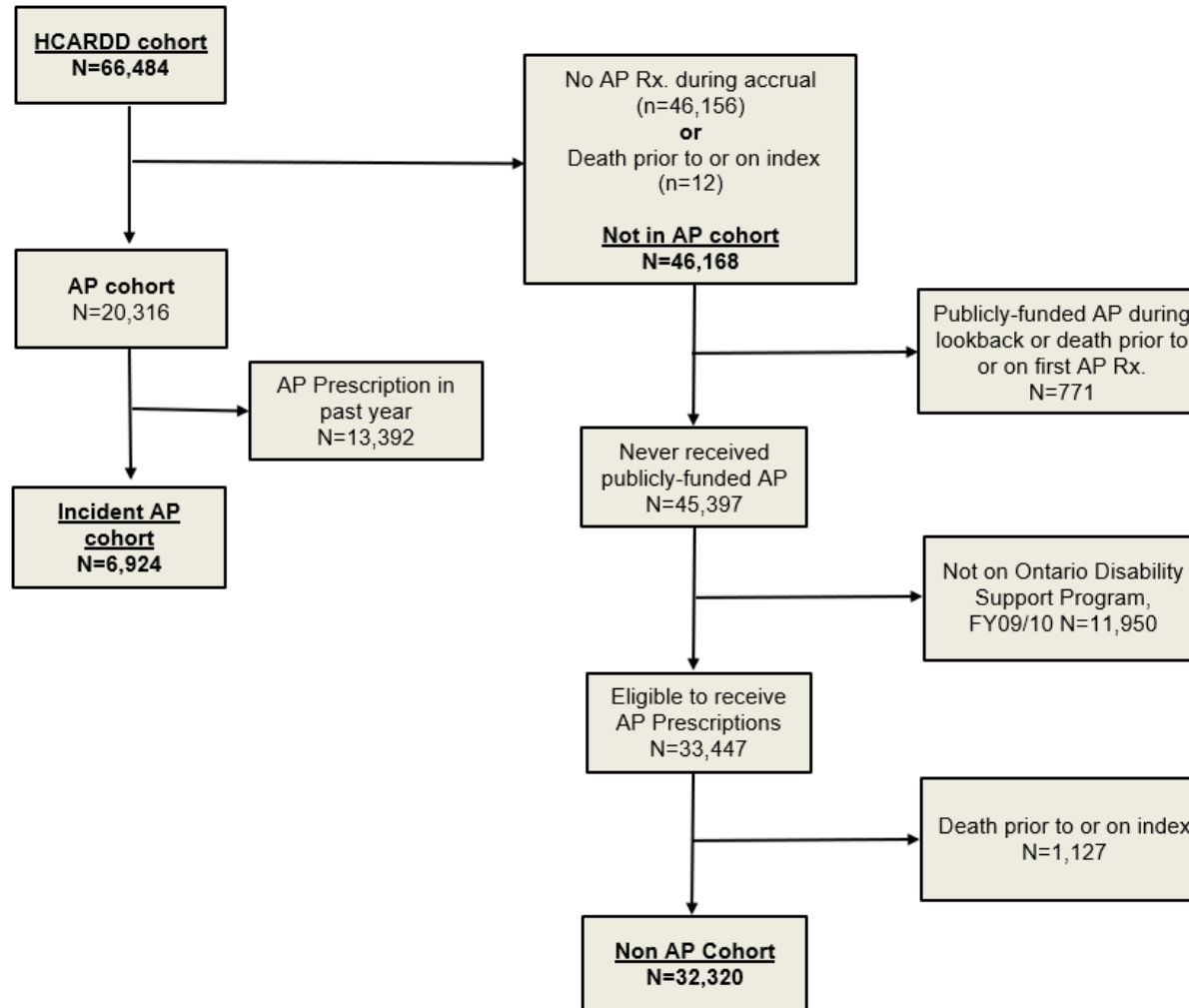
eTable 4: Other Psychiatric Diagnosis (Other depression, anxiety, somatoform, dysthymia, dissociative, psychosomatic, personality disorders, adjustment disorders, disorders of conduct or impulsivity)

OHIP Diagnosis Codes	OMHRS	CIHI-DAD/SDS
311, 300, 306, 308, 309, 301, 312	<p>ICD9: 311, 300, 306, 308, 309, 301, 312</p> <p>ICD10: F32.0, F32.1, F32.2, F32.8, F32.9, F33.0, F33.4, F33.8, F33.9, F34, F38, F39, F40, F41, F42, F43.0, F43.1, F43.8, F43.9, F44, F45, F60, F61, F62, F68, F69, F43.2, F63, F90, F91, F92, F93, F94, F95, F98</p>	<p>ICD10: F32.0, F32.1, F32.2, F32.8, F32.9, F33.0, F33.4, F33.8, F33.9, F34, F38, F39, F40, F41, F42, F43.0, F43.1, F43.8, F43.9, F44, F45, F60, F61, F62, F68, F69, F43.2, F63, F90, F91, F92, F93, F94, F95, F98</p>

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eFigure 1: Diagram of exclusion criteria in cohort creation



AP: Antipsychotic

HCARDD: Health Care Access Research and Developmental Disabilities

Rx: Prescription